



ثانوية التكنولوجيا التطبيقية
Applied Technology High School

SAT I

2011 / 2012

Question booklet # 1

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| Grade | 11 |
| Cluster | Core |
| Subject | Mathematics |

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|----------------|--|---------|--|
| Student Name | | | |
| Student Number | | Section | |

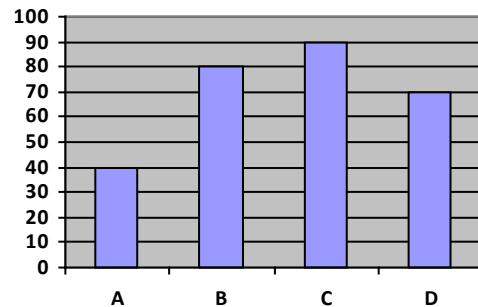
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| Coverage | ➤ SAT I, Integers, consecutive Integers, Odd Integers, Even Integers, Prime Numbers and Digits. Percent, Ratio and Proportion etc. |
|----------|--|

1. If a and b are even integers. Which of the following must be **Odd** integer?

- I. a^2b
 - II. $a+b^2$
 - III. $2ab$
- a. None
 - b. I only
 - c. II only
 - d. III only
 - e. I and II
-

2. The graph to the right shows the scores of four students in math quiz. What is the difference between the greatest and the least scores?

- a. 10
- b. 20
- c. 30
- d. 40
- e. 50



3. If x is a positive even integer, which of the following is **NOT** an even integer?

- a. $x - 2$
 - b. $x + 2$
 - c. $x + 1$
 - d. $x - 4$
 - e. $x + 4$
-

4. What is the greatest number of sugar bags, each $\frac{2}{5}$ of Kilograms, which can be taking from 16 Kilogram bag?

- a. 30
- b. 35
- c. 40
- d. 45
- e. 50

5. Which of the following is equal to 0.555?

- a. $\frac{5}{10} + \frac{5}{100} + \frac{5}{1000}$
 - b. $0.5 + 0.50 + 0.500$
 - c. $\frac{555}{100}$
 - d. $\frac{50}{10} + \frac{500}{100} + \frac{5000}{1000}$
 - e. $0.5 + 0.55 + 0.555$
-

6. If a and b are odd integers. Which of the following must be also **Odd** integer?

- I. $2a - b$
 - II. $4a - 2b$
 - III. $4ab$
- a. None
 - b. I only
 - c. II only
 - d. III only
 - e. I and II
-

7. What is the greatest number of pieces of rope, each $\frac{2}{7}$ meter long, that can be cut from a piece of rope that is 8 meters long?

- a. 20
 - b. 24
 - c. 28
 - d. 32
 - e. 36
-

8. The ratio of the width of a rectangle to its length is 3 to 1. If the perimeter of the rectangle is 40, what is the width of the rectangle?

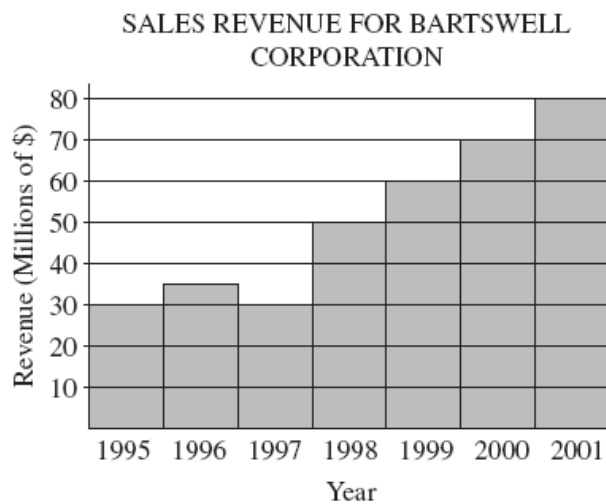
- a. 12
 - b. 15
 - c. 4
 - d. 5
 - e. 20
-

9. If $\frac{5}{8}$ of a number is 20, what is $\frac{1}{8}$ of the number?

- a. $\frac{1}{2}$
 - b. 4
 - c. 8
 - d. 16
 - e. 32
-

10. If 30 percent of n is 72, what is 15 percent of $2n$?

- a. 18
 - b. 36
 - c. 64
 - d. 72
 - e. 144
-



11. The bar graph above shows the annual sales revenue for the Bartswell Corporation for the years 1995 through 2001. For which of the following years was the percent increase in revenue from the previous year the same as it was in 1996?

- a. 1997
- b. 1998
- c. 1999
- d. 2000
- e. 2001

12. “All multiples of 3 are odd.”

Which of the following numbers provides a counterexample to the statement above?

- a. 9
 - b. 12
 - c. 13
 - d. 14
 - e. 15
-

13. If $x > x^2$, which of the following must be true?

- I. $x < 1$
- II. $x > 0$
- III. $x^2 > 1$

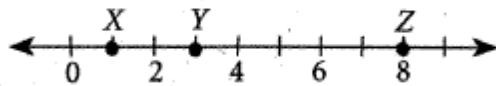
- a. I only
 - b. II only
 - c. I and II only
 - d. I and III only
 - e. I, II and III
-

14. There are 5 CD racks in a room. Each rack contains at least 10 CDs but not more than 14 CDs. Which of the following could be the total number of CDs on all five racks?

- a. 25
 - b. 35
 - c. 55
 - d. 75
 - e. 85
-

15. The price s of a sweater is reduced by 25% for a sale. After the sale, the reduced price is increased by 20% which of the following represent the final price of the sweater?

- a. $0.80s$
- b. $0.85s$
- c. $0.90s$
- d. $0.95s$
- e. $1.05s$



16. On the number line shown above, the length of YZ is how much greater than the length of XY ?

a. 3
b. 4
c. 5
d. 6
e. 7

17. $(3 \times 10^4) + (2 \times 10^2) + (4 \times 10) =$

a. 302400
b. 32400
c. 30240
d. 3240
e. 324

18. Andy solves problems 74 to 125 inclusive in a Math exercise. How many problems does he solve?

a. 53
b. 52
c. 51
d. 50
e. 49

19. If x and y are integers, and $3x + 2y = 13$, which of the following could be the value of y ?

a. 0
b. 1
c. 2
d. 3
e. 4

20. If $n > 0$, which of the following must be true?

- I. $n^2 > 1$
- II. $n - n^2 < 0$
- III. $2n - 1 > 0$

- a. I only
 - b. II only
 - c. III only
 - d. I and II only
 - e. none
-

21. 6 people meet for a business lunch. Each person shakes hands once with each other person present. How many handshakes take place?

- a. 30
 - b. 21
 - c. 18
 - d. 15
 - e. 10
-

22. 6 pints of a 20 percent solution of alcohol in water are mixed with 4 pints of a 10 percent alcohol in water solution. The percentage alcohol in the new solution is

- a. 16
 - b. 15
 - c. 14
 - d. 13
 - e. 12
-

23. The total weight of a tin and the cookies it contains is 2 pounds. After $\frac{3}{4}$ of the cookies are eaten, the tin and the remaining cookies weigh 0.8 pounds. What is the weight of the empty tin in pounds?

- a. 0.2
 - b. 0.3
 - c. 0.4
 - d. 0.5
 - e. 0.6
-

24. John drives from his house to a beach 150 miles away, and at the end of the day drives home. If he drives at an average of 50 miles per hour, how long does the round trip take?

- a. 3 hours
 - b. 2 hours
 - c. 6 hours
 - d. 5 hours
 - e. 4 hours
-

25. If $5a = 20b$, then $b/a =$

- a. 4
 - b. $\frac{1}{4}$
 - c. $\frac{4}{1}$
 - d. 10
 - e. $\frac{1}{10}$
-

26. If Jane has 5 pairs of pants and 7 shirts, how many different combinations of pants and shirts are possible?

- a. 25
 - b. 42
 - c. 38
 - d. 35
 - e. 24
-

27. 18 is approximately what percent of 44?

- a. 41%
 - b. 35%
 - c. 49%
 - d. 39%
 - e. 36%
-

28. If the median of x consecutive odd integers is 9, then the average is:

- a. 6
 - b. 9
 - c. 8
 - d. 10
 - e. 12
-

29. in a classroom of 35 students , 14 are male , what percent of the classroom is male

- a. 14%
 - b. 20 %
 - c. 30 %
 - d. 40%
 - e. 50 %
-

30. If an integer is divisible by 6 and by 9 then the integer must be divisible by which of the following?

- a. 12
- b. 18
- c. 24
- d. 36
- e. 54

31. A certain machine can make 3 widgets every 2 seconds, at this rate how many widgets will be made in 1 minute

- a. 90
- b. 110
- c. 150
- d. 180
- e. 220

32. Which of the following expressions describes the indicated values on the line below ?



-
- a. $x \geq 1$
 - b. $x \leq 1$
 - c. $x \geq |1|$
 - d. $|x| \geq 1$
 - e. $|x| \leq 1$
-

33. In the sequence 4, 12, 36, x , 324 what is the most likely value for x ?

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- a. 64
 - b. 108
 - c. 136
 - d. 184
 - e. 276

End of practice booklet 1